

## Section 4-3: Congruent Triangles

By the end of this lesson, you should be able to answer:

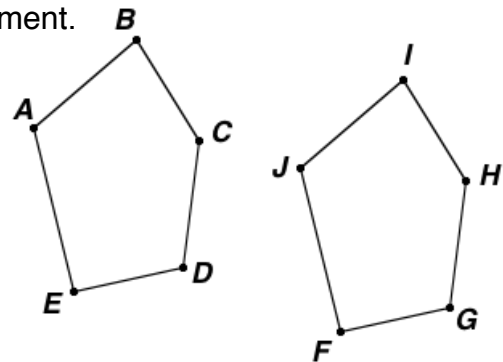
- How do you name and use corresponding parts of congruent polygons?
- How do you prove triangles congruent using the definition of congruence?

Define the following:

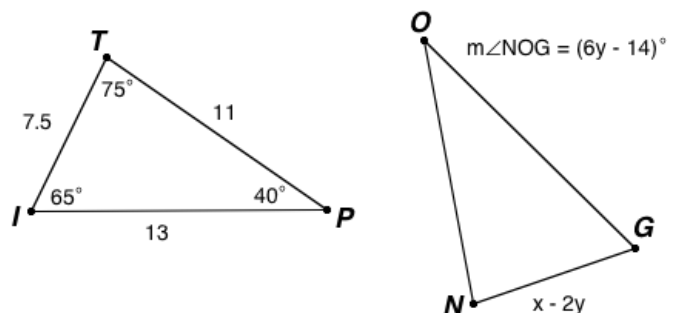
1. Congruent
2. Congruent Polygons
3. Corresponding Parts

Theorem 4.3 - Third Angles Theorem

*Example 1:* Show that the polygons are congruent by identifying all of the congruent corresponding parts. Then write a congruence statement.



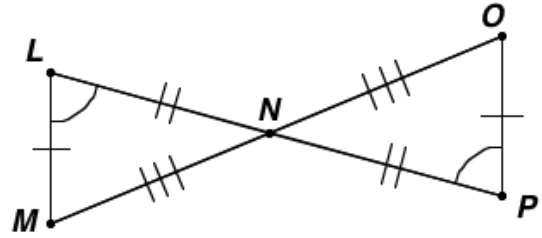
*Example 2:* In the diagram,  $\triangle ITP \cong \triangle NGO$ . Find the values of  $x$  and  $y$ .



Example 3: Write a two-column proof.

**Given:**  $\angle L \cong \angle P$ ,  $\overline{LM} \cong \overline{PO}$ ,  $\overline{LN} \cong \overline{PN}$ ,  $\overline{MN} \cong \overline{OP}$

**Prove:**  $\triangle LMN \cong \triangle PON$



Problem Set:

"I've always tried to go a step past wherever people expected me to end up." - Beverly Sills